Appendix L - IT Future Bridge & Infusion Strategies

IT Future Bridge and Infusion Strategies

Table of Contents

Infusion Strategy Purpose and Process

This appendix focuses on the vision and strategies that are required to both support the current activities and bridge the near, intermediate and long term planning horizon requirements. The near term horizon refers to 2006 - 2008 and the intermediate term refers to 2006 – 2010 and beyond. The strategy development and infusion process includes steps that are required to effectively engage leading global and national issues as well as to maximize available opportunities, including implementing a fully mature digital government and moving to a transformed form of government in Michigan. The Michigan strategy infusion process refers to a structured reassessment and redesign of goals, strategies, processes and programs while they are operating and includes the following elements:

- The shift from an information technology (IT) to an information, communication, technology (ICT) conceptualization of mission, strategies and actions
- Full implementation of an effective and mature digital government within Michigan's public sector, shifting from access and interaction to engagement and participation
- Use of information, communications, technology and process redesign to transform government goals and desired outcomes, including governance and participation, decision-making and business processes, quality and variety of services, and cross-boundary, collaborative relationships

The infusion strategies complement and are integrated with or infused into the current IT Strategic Plan goal and strategy structure as well as the Agency Services and Cabinet Action Plans. Further, they will be refined and implemented as formal goals and strategies for subsequent planning cycles. The infusion strategies are tailored to successfully engage the following global and national issues and address emerging opportunities.

Leading Global, National Issues and Drivers

- **Information:** Ubiquity of information, knowledge, and intellectual capital.
- **Connectivity and communications:** Explosion of connectivity, including the extended Internet and innovation networks.
- **Innovation potential:** Accelerating, leveraging effects of connectivity, data mining and knowledge pools on innovation.
- **Information, communications and technology (ICT) defining business and government potential:** Shift of ICT from support systems for business processes to drivers that define business and government potential.
- **Competitiveness:** Effects of global, national and inter-state competitiveness, including information, communications and technology competition.
- **New customer and worker requirements:** Digital generation, knowledge worker and baby boom echo consequences; change in IT worker and profession requirements.
- **Sourcing:** Full range of benefits and challenges of sourcing options and tradeoffs, including strengthening in-sourcing potential at the local level, including rural and outlying areas.

- **Governing by network not hierarchies:** Flattening of hierarchies through governing by network, busting of silos within and among the public and private sectors.
- **Security:** Security strategies and funding relative to need and sustained terrorism.

Selected Emerging Opportunities

- **Digital government:** Fully advance and implement mature digital government. This requires Web, infrastructure consolidation, enterprise architecture, back office re-engineering, multi-channel strategies, shifting to reduced channels, investment management strategies, performance metrics, integrated data management, borderless services and more.
- **Transformation of government:** Continue and accelerate the transformation of government through providing access and transparency, enabling participation (e.g. e - citizenship), process redesign, variety and quality of services, improved decision-making, performance management supported by technology, and other capabilities.
- **Management and investment capabilities:** Establish management, governance and organizational practices that support digital government and the transformation of government, including innovation, investment and performance management.
- **Target and effectively engage leading global and national issues**: Build on existing strengths and utilize the most effective, best practices; correct current as well as opportunity and emerging gaps; effectively identify and engage the leading, relevant global and national drivers.
- **Signature Michigan IT initiatives:** Address the issues and priorities specific, perhaps unique to Michigan. Provide issue assessment, solution and process design and IT support for selected flagship issue areas such as economic development, health care, education, agriculture, tourism, environment, security and others.

Bridge and Infusion Strategies

Information, Knowledge Management and Intellectual Capital

Strengthen and advance the use and role of information and knowledge management, and the development of intellectual capital within the public and private sectors in Michigan.

Information and knowledge management

Strengthen internal and cross -boundary public and private sector information and knowledge sharing and management.

- **Information sharing EA capabilities:** Refine enterprise architecture to enable data, information and knowledge sharing within the public sector and among the public and private sector.

- **Information service collaborative relationships**: Establish collaborative relationships and shared information based services with the Department of History Arts and Libraries (HAL), the Michigan Electronic Library (MeL), higher education, locals, and private sector as partners.

Communications and intellectual capital as communications destination / origin

Integrate the use of information, knowledge and intellectual capital as content, service and part of communication process.

- **Network connectivity:** Develop and support high capacity, statewide access to information and services, regardless of geographic location and technology or applications used.
- **Intellectual content and destination activities:** Develop collaborative relations on content and destination activities with higher education, libraries, arts, Michigan entertainment industry, virtual cultural tourism, and festivals.

IT professional roles, knowledge workers and intellectual capital

Support the development of emerging IT professional skill and experience requirements, knowledge workers and intellectual capital in Michigan.

- **IT profession transformation:** Assist in developing IT professional domains of expertise in changing and emerging areas such as technology, information, processes and relationships.
- **Training knowledge workers:** Partner with the Department of Labor and Economic Growth and higher and K-12 education to support the training of new knowledge workers and retraining of workers with legacy skills.
- **Michigan intellectual capital pools:** Help facilitate the creation of intellectual, knowledge and skill capabilities pools in Michigan.

Michigan signature, leveraged information solutions

Support and develop Michigan signature, leveraged solutions using information, knowledge and intellectual capital.

- **Smart, digital cities and communities:** Support and advance smart / digital cities and communities concept and practices, integrating with the cool cities and related initiatives.
- **UM / Google:** Support and partner with the UM / Google information, knowledge, and intellectual capital initiatives.

ICT, Digital Government Innovation, Effectiveness and Maturity

Build upon Michigan's existing best practice and accomplishment base, proactively using and developing best practices, innovation and technology planning and management to fully implement effective and mature digital government within Michigan's public sector.

Innovative processes, solutions and technologies

Maintain and expand standards of excellence and innovation to secure Michigan's future. Strengthen the capability to identify, support and implement innovative processes, solutions and technologies.

- **Independent standards of excellence:** Base the establishment of performance standards, tracking of trends and best practices on the advice and counsel of the broadest range and best skills, knowledge, experience and independent judgment available.
- **Target best practices and innovations:** Selectively adapt management and technology best practices and innovations (public, private, national and global) by aligning them and providing support to public policy priorities, agency business and services, and enterprise needs.
- **Incentives for innovation:** Identify, provide incentives for, and remove barriers against innovation within the Michigan Department of Information Technology (MDIT). Place a premium on innovation within MDIT through ongoing process assessment and openness to redesign.
- **Collaborative information, technology and science solutions:** Collaborate on integrating internal and external processes and IT solutions with other technology, science and related solutions within the public and private sectors.

Technology planning, management and targeting leading edge solutions

Accelerate and advance the technology and planning processes, including formalizing procedures and selectively utilizing leading edge solutions.

- **Formal, integrated innovation and emerging technology planning and management processes:** Identify and implement the requirements for integrating, advancing, and formalizing the innovation and emerging technology planning and management processes.
- **Provide ICT support for cabinet plan and statewide issues:** Provide IT support to the Cabinet Action Plan and agency business plan priorities and strategies, both by strengthening existing initiatives as well as by identifying new opportunities
- **Signature ICT initiatives:** Provide issue assessment, solution and process design and IT support for selected flagship issue areas such as economic development, health care education. Need to provide adequate project management, funding and partnership support.
- **Accelerate and compress analytic and action time frames:** Respond to the fast pace of changes in technology and drivers and trends by accelerating analysis, assessment and engagement with trends and drivers.
    - Expand the practical out year assessment horizon to 2010, assuming faster maturity and productivity times for selected technologies.
    - Identify, assess and adopt real- or right-time solution opportunities, and selectively become an early adopter for high priority, high potential gain areas, putting into practice a real time enterprise (RTE).

ICT and digital government effectiveness and maturity

Fully implement effective and mature digital government within Michigan's public sector, shifting from access and interaction to engagement and participation. Achieve full maturity in digital government and ICT management and capabilities, including information, communications, and technology resources and services management.

- **Mature digital government strategies:** Develop goals and strategies for bringing digital government to full maturity by 2010.
- **Global standards**: Review, test and apply the Information Technology Infrastructure Library (ITIL) practices and standards in the areas of support service, service management, delivery, infrastructure, application, security and project management.
- **Cross-boundary and service enabling enterprise architecture and guiding principles:** Develop a robust enterprise architecture and standards capable of supporting cross-boundary, partnered relationships – incorporating technology, business, service (SOA) and performance provisions – supplemented and supported by guiding principles that are an integral and enforced part of the planning, project design and selection, budgeting and procurement processes.
- **Investment management and funding model:** Advance IT investment management capabilities and maturity (GAO - ITIM) by a planned shift from building the investment foundation to developing an investment folio, improving the investment process, and leveraging for strategic outcomes. Develop a more flexible funding and resource allocation mechanism, including for capital outlay and investments, innovations, enterprise solutions and sharing of resources.
- **Accountability and performance management:** Strengthen accountability, performance and outcome management, including the use of information, cost data and metrics in decision-making and resource allocation. Integrate the requirements for agency, IT strategic and cabinet action plans as well as for relationships for third party public and private sector service providers.

Use Information, Communications, Technology and Process Redesign to Transform Government Goals and Desired Outcomes

(Including governance and participation, decision-making and business processes, quality and variety of services, and collaborative relationships)

Government transformation goals and desired outcomes

Develop a government transformation goal framework and align the goals, strategies and desired outcomes with the Cabinet, Information Technology Strategic, and Agency Services plans.

- **Strategies for transformed government:** Develop goals and strategies to evolve digital government to transformed government.
- **2006 – 2009 government transformation initiatives:** Identify and prioritize the government infusion and transformation capabilities and Michigan opportunities available through information, communications and technology,

including as drivers and transformers of business processes, governance and decision-making. Incorporate transformation initiatives in the 2006 – 2009 IT Strategic and Cabinet Action Plans, with a minimum of one new initiative in each goal area.

- **Networked government:** Develop a policy and conceptual framework for transitioning digital government to a networked government. Networked government is characterized by a high level of public–private collaboration, use of third party service delivery and facilitation relationships, and joined-up relations with other levels and peer governments. These networked relationships are enabled trough technology and provide citizens with broader, improved and qualitatively different choice of services.

Expanded breadth and depth of cross-boundary issue engagement and collaborative relationships

Expand the range of public-public and public-private sector collaborative relationships within the state, nationally and globally. Collaboration includes shared services, work and workers, resources and infrastructure, and information and knowledge, including advisory support and participation in planning.

- **Global perspective and relationships:** Develop and utilize a formal global issue assessment, policy and operational perspective in recognizing collaborative opportunities as well as competitive relationships. Issues to be addressed include the state brand, competitive opportunities, sourcing policy options, workforce development, and communications capabilities.
- **Local, at-home capabilities and opportunities:** Support and enable local, sub-state economic development opportunities through network and virtual co-location technologies and in-sourcing policies in dealing with global and local partners and customers.

Values and public outcomes

Ensure that sound public policy values are supported and infused into a transformed government and result in desirable outcomes. Such values include access, transparency, inclusion and participation, accountability and performance.

- **Transparency and accountability:** Ensure that Michigan government is accessible and transparent and that information on governance and government performance is available in a timely and convenient manner.
- **Inclusiveness and e – citizenship:** Ensure that Michigan citizens can participate in governance and that Michigan has state-of-art e-citizenship capabilities.

Infusion Strategy Matrix (Representative Strategies and Initiatives)

The infusion strategy matrix crosswalks representative transfusion strategies and initiatives each of the three goal areas to the Cabinet Action, IT Strategic and Agency Services Plans.

Bridge and Infusion Strategies	Representative Strategies and Initiatives		
	Cabinet Action Plan	State IT Strategic Plan	Agency Services Plan

Information, Knowledge Management, and Intellectual Capital

Information and Knowledge Management	- Economy: Sustain and create business investment and jobs in Michigan - Education: Higher education, research and development, lifelong learning	- Information sharing EA capabilities (architecture and standards) - Information service collaborative relationships	- Data integration / sharing - Become a business process repository
Communications: Information and Intellectual Capital as Communications Destinations	- Network connectivity (high speed Internet) - Education: lifelong learning - Economy: Cultural tourism	Goal one: Expand MI services to reach anyone, anytime from anywhere	- Citizen transactions - Collaboration tools - Shared administrative services
IT Professional Roles, Knowledge Workers and Intellectual Capital	- IT profession transformation	Goal four: Make MI a "great workplace" and employer of choice for technology professionals	- Become business process repository - Standardized tools, staff skills and architecture
Signature, Leveraged Information Solutions	- Smart , digital cities and communities - Economy: Continue to grow Michigan core communities as diverse, safe and healthy talent centers	Goal five: Innovative partnership programs	- Innovative partnership programs - Seven solution clusters

Innovation and Digital Government Maturity

Innovative Processes, Solutions and Technologies	- Independent standards of excellence (better government) - Collaborative information, technology and science solutions - Economy: increase non-auto related jobs	- Independent standards of excellence; target best practices and innovations (Goal three: Manage technology to provide better service and faster delivery) - Innovative partnerships in education, environment, human services, economy, better government and homeland security (Goal five: Community partnerships)	- Transform government service through IT innovation and business process redesign - Drive IT innovation by committing to on-going research into future tools and platforms - Independent standards of excellence (develop ourselves into a world class organization)
Technology Management and Leading Edge Solutions	Provide ICT support for Cabinet Plan and statewide issues; signature ICT initiatives (support selected strategies in all goal areas)	- Integrated, formal technology planning and management (optimally utilize technology resources) - Signature ICT initiatives	- Transform government service through IT innovation and business process redesign - Integrated, formal technology planning and management (support seven solution clusters) - Signature ICT initiatives: support the priorities of the governor and state agencies by delivering on strategic IT projects

Digital Government Maturity	- Global standards (better government: cut red tape in state government by streamlining services and implementing innovative technology to reduce time, mistakes and costs) - Make government in Michigan more cost effective and efficient	- Mature digital government strategies (transform MI services through sharing and collaboration) - Global standards - Cross-boundary and service EA (consistent architecture and standards) - Investment management and funding model - Accountability and performance management (business case solutions)	- Transform government service through IT innovation and business process redesign - Global standards (develop ourselves into a world class organization: budget and operational alignment, service delivery model, standardized processes) - Standardized tools, staff skills and architecture - Integrated infrastructure - Collaborative tools - Shared administrative services

Government Transformation

Transformation Goals and Strategies	- Strategies for transformed government - 2006 – 2009 government transformation initiatives supporting CAP goals and strategies	- Strategies for transformed government - 2006 – 2009 government transformation initiatives	- Strategies for transformed government - 2006 – 2009 government transformation initiatives - Support the priorities of the governor and state agencies by delivering on strategic IT projects
Expanded Cross-boundary Relationships	- Networked government - Global perspective and relationships - Local, at home capabilities and opportunities - Support partnership opportunities for all goal areas - Support economic development, competitiveness, state brand	- Networked government - Global perspective and relationships - Goal 2: Sharing and collaboration - Goal five: Community of partnerships	- Networked government (Data integration / sharing, collaboration tools, shared administrative services) - Global perspective and relationships ("World Class" organization)
Values and Public	- Transparency and	Support all goals:	Support all goals:

Outcomes	Accountability - Inclusiveness and e – citizenship - Government Performance Project follow-up	Access, sharing, collaboration, accountability (business case), excellence (workplace and staff development), partnerships, innovation	Access, sharing, collaboration, accountability (business case), excellence (workplace and staff development), partnerships, innovation